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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

COULTER, KENNETH R

ART UNIT

PAPER NUMBER

2141

DATE MAILED: 07/02/2004

14

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

09/538,543

Applicant(s)

HUBBARD, EDWARD A.

Examiner

Kenneth R Coulter

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 March 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 53-73 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 53-73 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 1/16/01; 1/4/02.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 53 – 73 are rejected under 35 U.S.C. 102(b) as being disclosed by London (POPCORN – A Paradigm for Global-Computing).

2.1 Regarding claim 53, London discloses a method of configuring a distributed parallel processing system, comprising:

providing a server system (Fig. 1);

coupling the server system to a network, the network being connectable to distributed devices (Fig. 1);

providing a notice to the distributed devices of a desire by the server system to configure the distributed parallel processing system through coupling selected ones of the distributed devices through the network, wherein the selected distributed devices are enabled by the server system to perform workloads for the configured distributed parallel processing system (Fig. 1; p. 11, fifth paragraph “the process by which buyers and sellers of CPU time meet and trade”);

providing an incentive to the distributed devices communicating with the server system through the network in response to the notice to participate in the configured distributed parallel processing system (p. 12, third paragraph "One may think of several **motivations for one processor to provide CPU-time to another**: ... 6. **Lottery**"; p. 26, paragraph 3 "A **computelet** is an object that carries a computation intended for **remote execution**.");

generating a workload capability factor quantifying workload processing capability for each of the selected distributed services (p. 26, last paragraph through p. 27, first paragraph "the **computation-packet encapsulates** in addition **all information regarding the local processing** of this computelet: how it gets constructed, the price offered for it, how it is handled locally when the answer arrives, how it is verified, **what if the remote computation fails somehow, etc.**");

managing the selected distributed devices participation in the configured distributed parallel processing system by the server system utilizing the workload capability factor (p. 26, last paragraph through p. 27, first paragraph).

2.2 Per claim 54, London teaches generating an incentive value for a distributed device in response to a completed workload (p. 12, third paragraph "One may think of several **motivations for one processor to provide CPU-time to another**: ... 6. **Lottery**).

2.3 Regarding claim 55, London teaches generating an incentive value for a distributed device in response to a workload capability factor generated for the distributed device (p. 13, paragraph 5 “The market determines a fixed price for every type of commodity (JOP or computelet), the **buyers and sellers can either accept this price or seek a market with higher return.**”; p. 13, last paragraph “Each buyer and seller have their own trading policy, and the matching of a seller to a buyer must meet the terms of these policies.”).

2.4 Per claim 56, London teaches that the workload capability factor is generated in response to a performance in completing a benchmark workload (p. 12, paragraph 2 “Our basic goods are ‘JOPs’ – Java Operations. ... Each computelet takes some number of JOPs to execute, and the **price for the computelet is proportional to the number of JOPs it actually took to compute remotely.** This is measured (or actually, approximated) using a **simple benchmark we piggyback on each computelet.**”).

2.5 Regarding claim 57, London discloses that the server system schedules and allocates workloads to the selected distributed devices based upon the workload capability factor generated in response to the performance in completing the benchmark workload (p. 12, paragraph 2 “Our basic goods are ‘JOPs’ – Java Operations. ... Each computelet takes some number of JOPs to execute, and the **price for the computelet is proportional to the number of JOPs it actually took to compute remotely.** This

is measured (or actually, approximated) using a **simple benchmark we piggyback on each computelet.**").

2.6 Per claim 58, London teaches that the workload capability factor is generated in response to a workload completed by one of the selected distributed devices for the configured distributed parallel processing system (p. 12, third paragraph "One may think of several **motivations for one processor to provide CPU-time to another:** ... 6. **Lottery**"; p. 26, paragraph 3 "A **computelet** is an object that carries a computation intended for **remote execution.**"; p. 12, paragraph 2 "Our basic goods are 'JOPs' – Java Operations. ... Each computelet takes some number of JOPs to execute, and the **price for the computelet is proportional to the number of JOPs it actually took to compute remotely.**").

2.7 Regarding claim 59, London discloses that the workload capability factor is utilized to determine an entry value to a sweepstakes (p. 12, third paragraph "One may think of several **motivations for one processor to provide CPU-time to another:** ... 6. **Lottery**"; p. 26, paragraph 3 "A **computelet** is an object that carries a computation intended for **remote execution.**"; p. 12, paragraph 2 "Our basic goods are 'JOPs' – Java Operations. ... Each computelet takes some number of JOPs to execute, and the **price for the computelet is proportional to the number of JOPs it actually took to compute remotely.**").

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2.8 Per claim 60, London teaches that the sweepstakes entry value increases for an increased workload capability factor of the selected distributed device (p. 12, third paragraph "One may think of several **motivations for one processor to provide CPU-time to another**: ... 6. **Lottery**"; p. 26, paragraph 3 "A **computelet** is an object that carries a computation intended for **remote execution**."; p. 12, paragraph 2 "Our basic goods are 'JOPs' – Java Operations. ... Each computelet takes some number of JOPs to execute, and the **price for the computelet is proportional to the number of JOPs it actually took to compute remotely**.").

2.9 Regarding claim 61, London discloses the step of transferring a software agent from the server system to the selected distributed devices, wherein the software agent manages a workload performed by the selected distributed devices (p. 38, paragraph 6 "software agents"; p. 13, last paragraph "Each buyer and seller have their own trading policy, and the matching of a seller to a buyer must meet the terms of these policies.").

2.10 Per claim 62, London teaches that the software agent further provides information to a user about an increase in an incentive value offered for an increase in the workload capability factor of the selected distributed device (p. 38, paragraph 6 "software agents"; p. 13, last paragraph "Each buyer and seller have their own trading policy, and the matching of a seller to a buyer must meet the terms of these policies.").

2.11 Regarding claims 63 – 73, the rejection of claims 53 – 62 under 35 USC 102(b) (paragraphs 2.1 – 2.10 above) apply.

In addition, London the storage devices that are necessary to implement the system of London are inherent in the London reference.

Response to Arguments

3. Applicant's arguments filed 3/26/2004 have been fully considered but they are not persuasive.

Applicant states that Examiner has failed to specifically point out where in London the invention of claims 53 – 73 is found.

A detailed rejection that specifically points out the limitations is found above.

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth R Coulter whose telephone number is 703 305-8447. The examiner can normally be reached on 5 4 9.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rupal Dharia can be reached on 703 305-4003. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

krc

KENNETH R. COULTER
PRIMARY EXAMINER
